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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,171	03/01/2004	Lawrence L. Case	038.0081 (SC13049TH)	3189
29906	7590	09/14/2007		
INGRASSIA FISHER & LORENZ, P.C. 7150 E. CAMELBACK, STE. 325 SCOTTSDALE, AZ 85251			EXAMINER TRUONG, THANHNGA B	
			ART UNIT	PAPER NUMBER
			2135	
			MAIL DATE	DELIVERY MODE
			09/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/791,171

Applicant(s)

CASE ET AL.

Examiner

Thanhnga B. Truong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/1/04;11/16/04;8/21/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to the communication filed on July 25, 2006. Claims 1-19 are pending. At this time, claims 1-19 are rejected.

Information Disclosure Statement

2. The information disclosure statement (IDS) filed on March 01, 2004, November 16, 2004 and August 21, 2006 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deng et al (US 6,701,432 B1), and further in view of Kawase (US 6,848,061 B2).

a. *Referring to claim 1:*

i. Deng teaches an electronic device including an autonomous memory checker for runtime security assurance, the electronic device comprising:

(1) a controller (**see Figure 2, element 124 of Deng**);

(2) a memory reference file coupled to said controller (**see Figure 3 and more details in column 5, lines 7-20 of Deng**); and

(3) an authentication engine coupled to said controller wherein a check is performed during runtime operation of the electronic device comparing a real-time reference value corresponding to information stored in memory to a memory reference value (**see Figure 1b and Figure 4 and more details in column 5, lines 21-29; column 9, lines 20-41 of Deng**).

ii. Although Deng teaches an authentication engine and compares the content information via firewall engine, Deng is silent on the capability of

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comparing a real-time reference value corresponding to information stored in memory to a memory reference value. On the other hand, Kawase teaches this limitation in **Figures 1-5 and more details in column 4, line 65 through column 5, line 7 of Kawase.**

iii. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to:

(1) have modified the invention of Deng with the teaching of Kawase by using a direct memory access controller to read timing and control data from memory and send the control data to a drive controller (**column 3, lines 27-30 of Kawase**).

iv. The ordinary skilled person would have been motivated to:

(1) have modified the invention of Deng with the teaching of Kawase for controlling drive timing and plural tables for recording control data used at each control change timing for each of plural control data types are stored to memory before the drive mechanism is driven (**column 3, lines 32-36 of Kawase**).

b. Referring to claims 2-3:

i. Deng further teaches:

(1) wherein said check is performed periodically during runtime operation of the electronic device or wherein said check is performed at random times during runtime operation of the electronic device (**column 3, lines 1-3 of Deng**).

c. Referring to claim 4:

i. Deng and Kawase further teach:

(1) further including a clock control block coupled to said authentication engine, said memory reference file, and said controller (**see Figure 6b and more details in column 9, line 64 through column 10, line 13 of Deng; column 8, lines 56-60 and column 9, lines 35-42 of Kawase**).

d. Referring to claim 5:

i. Deng further teaches:

(1) further including a direct memory access (DMA) controller coupled to said authentication engine and said controller (see **Figure 4 of Deng**).

e. Referring to claim 6:

i. The combination of teaching between Deng and Kawase teaches the claimed subject matter. Deng and Kawase further teach:

(1) further including a timing module coupled to said controller (see **Figure 1 of Kawase**; and see **Figure 6b and more details in column 9, line 64 through column 10, line 13 of Deng**).

f. Referring to claim 7:

i. Deng further teaches:

(1) wherein said memory reference value is generated corresponding to trusted information stored in memory and wherein said memory reference value is stored in said memory reference file (**column 5, lines 45-55 of Deng**).

g. Referring to claim 8:

i. Deng further teaches:

(1) wherein said trusted information stored in memory is processed by said authentication engine to generate said memory reference value (**column 5, lines 45-55 of Deng**).

h. Referring to claim 9:

i. Deng and Kawase further teach:

(1) wherein said information stored in memory is processed by said authentication engine to generate said real-time reference value, and wherein said information stored in memory has not been modified if said memory reference value is identical to said real-time reference value (**column 5, lines 45-55 of Deng**; and **Figures 1-5 and more details in column 4, line 65 through column 5, line 7 of Kawase**).

i. Referring to claims 10-15:

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i. These claims consist a method of operating an electronic device for runtime security assurance to implement claim 1, thus they are rejected with the same rationale applied against claims 1-9 above.

j. Referring to claims 16-19:

i. These claims consist a method of operating an electronic device for runtime security assurance to implement claim 1, thus they are rejected with the same rationale applied against claims 1-9 above.

ii. Deng further teaches:

(1) fetching said trusted information from memory during runtime for hashing by said autonomous memory checker (**see Figure 3 and more details in column 2, lines 13-15; column 5, lines 13-20 of Deng**); generating runtime hash values (e.g., digest results) with said trusted information retrieved during runtime (**column 9, lines 20-41 of Deng**).

(2) comparing said reference hash values to said runtime hash values; and signaling an error when said reference hash values differ from said runtime hash values to indicate that said trusted information has been modified (**column 9, lines 20-41 of Deng**).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Traw et al (US 6,009,527) discloses a computer system security (see Title).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhnga (Tanya) Truong whose telephone number is 571-272-3858.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached at 571-272-3859. The fax and phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

TBT

September 12, 2007

Chanhong B. Tan
Primary Examiner AU2135